



Summary of Fishery Surveys Bass Lake (west of Park Falls), Price County, 2007-2008

WDNR's Fisheries Management Team from Park Falls completed fyke netting and electrofishing surveys in 2007 and 2008 to assess the status of important fish populations in Bass Lake. Fyke netting in October 2007 attempted to capture black crappies. Fyke nets deployed again shortly after the 2008 spring thaw targeted walleye, muskellunge, and yellow perch. A late-spring electrofishing survey documented the abundance and size structure of smallmouth bass and bluegill populations. Quality, preferred, and memorable sizes referenced in this summary are based on standard proportions of world record lengths developed for each species by the American Fisheries Society. "Keeper size" is based on known angler behavior.

Survey Effort

On October 15th, 2007 with water temperature 55°F, we set three fyke nets for two nights (6 net-nights) to intercept fall movements of black crappies. On May 2nd, 2008 we set three fyke nets at locations chosen to intercept early spring spawning species and fished them without routine daily tending over two nights when water temperature was 46°F. Spring nets were emptied once concluding 6 net-nights of survey effort. Comparing measured water temperature with the optimal spawning temperature range of the targeted species, our spring fyke netting survey was well timed to represent muskellunge, walleye, and yellow perch population status. With water temperatures at 62°F our June 11th electrofishing survey should have coincided with the pre-spawn activities of smallmouth bass and bluegills. We sampled the entire 1.74-mile shoreline in 0.60 hour, including 0.51 mile sub-sampled for all species in 0.20 hour.

Habitat Characteristics

Bass Lake is an 84-acre drained lake (having an outlet, but no inlet) located about eight miles west of Park Falls, WI and the largest of five Price County lakes with the same name. The average depth is 16 feet, and maximum depth is 46 feet. The water is clear (Secchi depth = 10 feet) and the substrate is 15% sand, 30% gravel, 50% rock, 5% muck, supporting a low density of submergent and emergent vegetation. An unnamed stream discharges about one cubic foot per second from the northwest corner to Hay Creek, a Class 2 trout stream. The surrounding shoreland is 40% marsh and 60% upland. A shallow public boat landing is located on the north shore off Bass Lake Drive.

Summary of Results

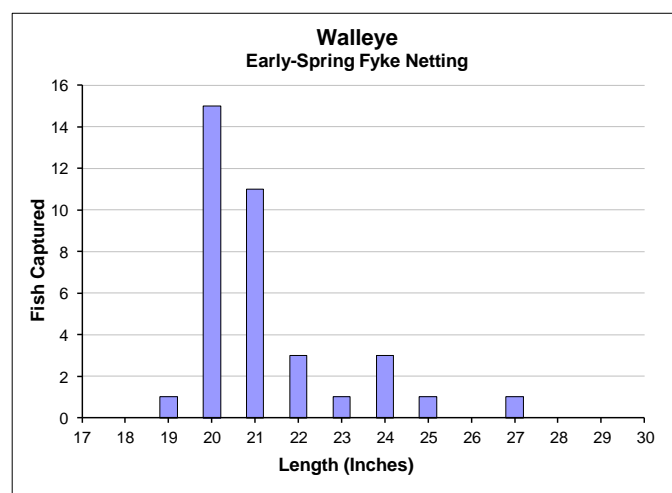
We captured 12 fish species in our most recent fyke netting and electrofishing surveys. The dominant predator was walleye and the most common panfish were bluegill and yellow perch. The only other gamefish captured were muskellunge and smallmouth bass. We captured 8.2 white suckers per net-night in our early spring fyke nets with most in the 9-12 inch range—a favorable population status seldom recorded in our lake surveys. We also noted high numbers of common shiners, which undoubtedly complement the forage base. We did not capture any black crappies during these surveys or in the previous survey in 1992, suggesting that crappies may be absent or present at an undetectable level of abundance.

Walleye



Early Spring Fyke Nets

Captured	6.0 per net-night $\geq 10"$
Quality Size $\geq 15"$	100%
Preferred Size $\geq 20"$	97%
Memorable Size $\geq 25"$	6%



Our capture rate of walleye in early spring fyke nets indicated a low to moderate population abundance for a lake of this size. The catch rate in this survey was similar to the rate last recorded in 1992, when we captured 5.2 walleyes per net-night and estimated population density was 1.8 adults per acre. Prior to this survey, walleye had not been stocked since 1993, suggesting that successful natural reproduction may have contributed to the population. A solid forage base of shiners, white suckers, and yellow perch allows walleyes in Bass Lake to grow to memorable size (≥ 25 inches). After finding no walleyes of intermediate size, WDNR resumed walleye stocking at rates of 35 small fingerlings (1-3") per acre in 2009, 2010, and 2012 and 10 large fingerlings (6-8") per acre in 2014. Our next survey scheduled in 2017 will evaluate whether this stocking strategy boosted recruitment and adult population abundance, as intended.

Muskellunge



Early Spring Fyke Nets

Captured	0.3 per net-night $\geq 20"$
Quality Size $\geq 30"$	50%
Preferred Size $\geq 38"$	0%
Memorable Size $\geq 42"$	0%

We captured two muskellunge 29 and 34 inches long in early spring fyke nets. With no musky stocking since 1989, we can assume that natural reproduction maintains the population at low abundance. With plentiful forage and a history of low abundance, we are somewhat surprised that Bass Lake does not

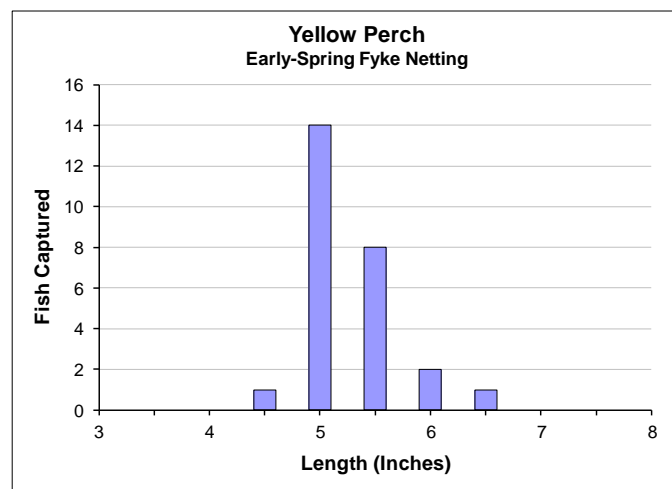
have more muskies or larger muskies. Perhaps small lake size limits population density and size structure. We recommend no management changes at this time and we expect no changes in population status under Northern Zone harvest regulations.

Yellow Perch



Early Spring Fyke Nets

Captured 4.2 per net-night $\geq 5"$	
Quality Size $\geq 8"$	0%
Preferred Size $\geq 10"$	0%
Memorable Size $\geq 12"$	0%



The catch rate and length distribution of yellow perch in early spring fyke nets indicate low population abundance with poor size structure. Perch in Bass Lake are serving as important forage, rather than opportunity for panfish anglers. We did not capture any perch longer than 7 inches in our netting survey.

Smallmouth Bass



Late Spring Electrofishing

Captured 1.7 per mile or 5.0 per hour $\geq 7"$	
Quality Size $\geq 11"$	100%
Preferred Size $\geq 14"$	0%
Memorable Size $\geq 17"$	0%

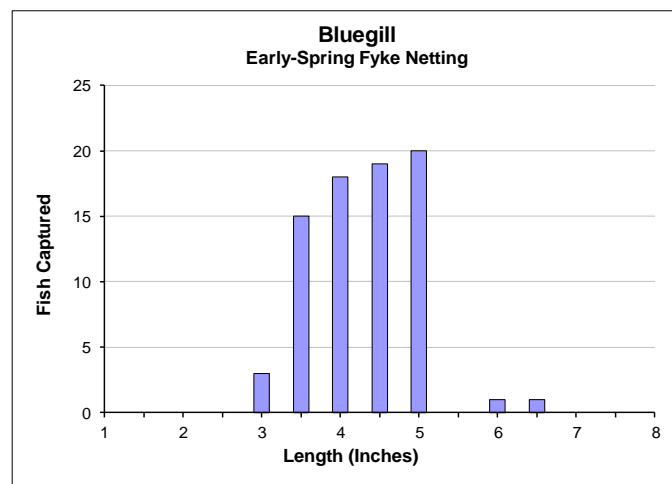
We captured smallmouth bass by late spring electrofishing at a very low rate indicating low population abundance. Of the three fish captured, all were around 12 inches long. Smallmouth bass are adding diversity to the predator base in Bass Lake, but they do not offer much promise for bass anglers. Although we did not capture any largemouth bass in this survey, past surveys documented them in low abundance, so there may still be a few in the lake.

Bluegill



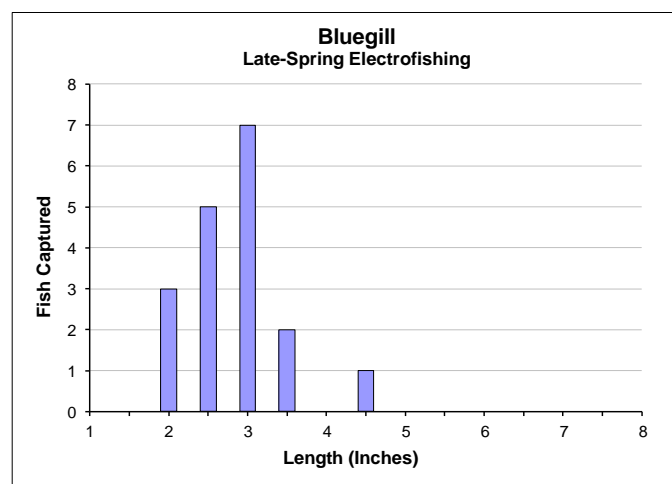
Early Spring Fyke Nets

Captured 13 per net-night ≥ 3 "	
Quality Size ≥ 6 "	3%
Keeper Size ≥ 7 "	0%
Preferred Size ≥ 8 "	0%



Late Spring Electrofishing

Captured 20 per mile or 50 per hour ≥ 3 "	
Quality Size ≥ 6 "	0%
Keeper Size ≥ 7 "	0%
Preferred Size ≥ 8 "	0%



Bluegills in Bass Lake do not offer much angling opportunity, either. Although our catch rates of bluegill showed low population abundance, size structure was still very poor. Typically, when we document low bluegill density, growth rates are satisfactory for bluegills to reach keeper and preferred sizes, but that has not been the case in Bass Lake. Past survey results were similar to these findings. Bluegill numbers have been low and size structure was poor in several surveys since 1984. If low nutrient concentrations are limiting productivity in this clear water lake, we foresee little or no change in bluegill population status.

Survey data collected and analyzed by: Jessica Krajniak, Greg Rublee, and Jeff Scheirer—WDNR Fishery Team, Park Falls.

Written by: Chad Leanna—Fishery Technician, February 2015.

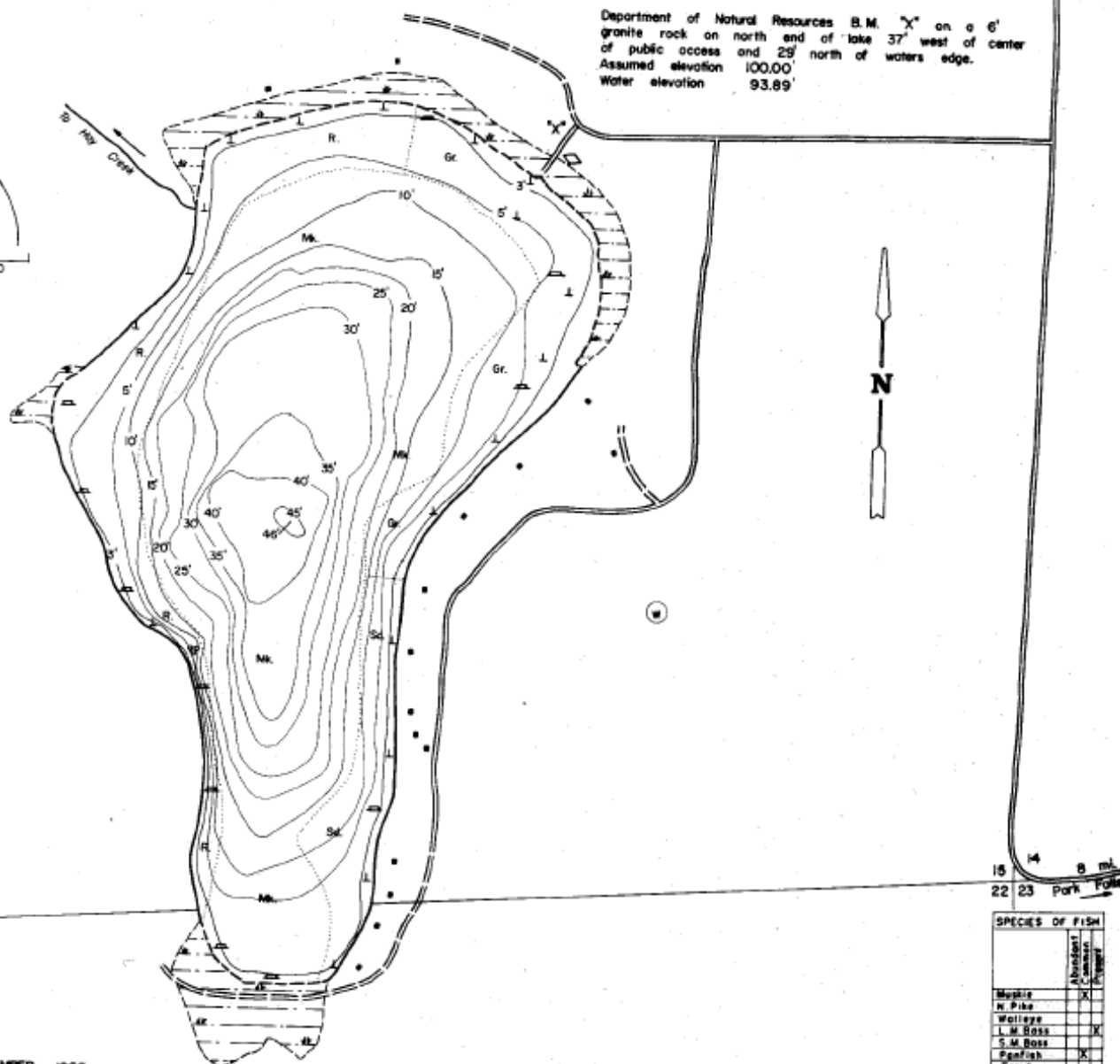
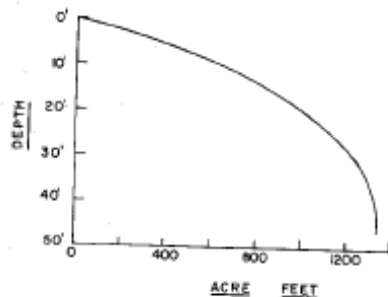
Reviewed by: Jeff Scheirer—Fishery Biologist, February 2015.

Approved for web posting by: Mike Vogelsang—acting Hayward Field Unit Supervisor, April 2015.

LAKE SURVEY MAP

BASS LAKE
PRICE COUNTY
SEC. 15 T. 40 N. R. 2 W.

Department of Natural Resources B.M. "X" on a 6' granite rock on north end of lake 37' west of center of public access and 28' north of waters edge.
Assumed elevation 100.00'
Water elevation 93.89'



16 15
21 22

SPECIES OF FISH		Abundant	Common	Rare
Muskie			X	
N. Pike				
Walleye				
L. M. Bass			X	
S. M. Bass				
Perch			X	
Trout				

EQUIPMENT RECORDING SONAR MAPPED SEPTEMBER 1968
MO. YR.

- TOPOGRAPHIC SYMBOLS
- (B) Brush
 - (P) Partially wooded
 - (W) Wooded
 - (C) Cleared
 - (P) Pastured
 - (A) Agricultural
 - B.M. Bench Mark
 - Dwelling
 - Resort

WATER ELEV. 93.89'

- LAKE BOTTOM SYMBOLS
- P. Peat
 - Mk. Muck
 - C. Clay
 - M. Marl
 - Sd. Sand
 - St. Silt
 - Gr. Gravel
 - R. Rubble
 - Br. Bedrock
 - T. Submerged vegetation
 - J. Emergent vegetation
 - F. Floating vegetation



◇ Access ◇ Access with Parking ◇ Boat Livery
Field work by: C. Busch, C. Olson, L. Sother Drawn by: R. Rose

AREA 84.30 ACRES
UNDER 3 FT. 1000 %
OVER 20 FT. 33.5 %
VOLUME 1339.42 ACRE FT.
TOTAL ALK. 9 P.P.M.
SHORELINE 1.61 MILES
MAX. DEPTH 46 FEET